

or individuals possessed of more than one pair of ovaries we have indications of a metameric reduplication of those organs similar to that of the testes in the Hirudinea.

A metamericly repetitional disposition of the ovaries is very rare among worms generally; in fact, it is only met with in the Platyhelminthes, the Cestoda and the Nemerteans both exhibiting it. Setting aside the Cestoda as highly specialized, we find that the only worms exhibiting the metameric reduplication of the ovaries are certain of the Planarians.

Beddard has shown in *Eudrilus*¹ that the condition of the oviducts and their accessory structures, to quote his words, "suggests a comparison with the corresponding organs in the Planarians, from which group I am disposed (following Lang) to derive the Annelids."

The facts which I have herein described and tabulated appear to me to justify a belief in the potentially reproductive nature of the individual somites of the Chætopod body, and to support Beddard's suggestion above alluded to.

EXPLANATION OF PLATE XIII.

Fig. 1. Abnormal Earthworm (*Allolobophora*, sp. inc.), dissected to show the genitalia, $\times 3$. The segmental organs and two posterior seminal vesicles removed from the right side.

- 1-18, the somites; *sg.o.*, the segmental organs; *m.*, the mesenteries; *n.c.*, the nerve commissures; *s.v.*, the seminal vesicles; *sp.*, the spermathecae; *t.*, the testes; *f.*, seminal funnels; *v.d.*, the vas deferens; *ov.*¹-*ov.*⁷, the ovaries; *ovd.*, the oviducts; *r.o.*, the receptacula ovarum.
2. Enlarged drawings of the ovaries from the right side, $\times 10$; drawn with a camera lucida.
- o.*, nearly ripe ova; *ov.*¹-*ov.*⁷, the seven ovaries.

3. On Stridulation in certain Lepidoptera, and on the Distortion of the Hind Wings in the Males of certain *Ommatophorinæ*. By G. F. HAMPSON, B.A. Oxon. &c.

[Received February 1, 1892.]

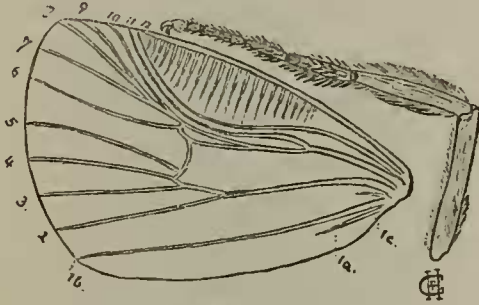
When working at the Indian Moths of the family *Agaristidae*, my attention was drawn by Mr. E. Y. Watson, of the Madras Staff Corps, to the powers of stridulation possessed by the males of *Ægocera tripartita*, Kirby, of which he had brought home a long series from Burma. This Moth flies at dusk, and the males produce a loud clicking sound audible at some distance off—click-click-click at intervals of about a second. This led me to investigate the subject in this species and in the only other Lepidoptera known to produce the same sound—certain Butterflies of the genus *Ageronia* and other allied genera from Brazil.

The males of *Æ. tripartita* (fig. 1, p. 189) obviously differ from those of all the other species of the genus in the possession of a large patch of hyaline membrane denuded of scales beneath the costa of the fore wing, and this at once suggests itself as being connected

¹ "The Anatomy of Earthworms," Q. J. M. S. n. s. vol. xxx. p. 455.

with the sound produced. When examined with a lens, it is seen that the wing-membrane is dilated so as to produce a large concavity on the underside, the membrane being thrown into deep transverse ridges, strongest immediately below the costa; and when the wing is cleared of scales it is seen that the costal and subcostal nervures have all been distorted and curved downward, so as to give increased space to the dilated and ridged membrane. The question then arose as to the organ that could be used in combination with this structure to produce the sound. I found that the fore tarsi, instead of being

Fig. 1.

*Egocera tripartita*, Kirby. ♂.

Fore leg and fore wing.

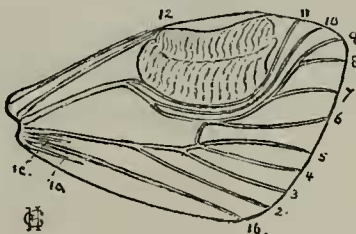
simply clothed with scales, or with the paired series of spines along the under surface that are present in many Lepidoptera to give greater power of attachment when settled, had these spines immensely developed all over the upper surface of the tarsi, and that if held extended, instead of folded against the under surface of the body, the usual method of carrying the legs in Lepidoptera during flight, the spined upper surface of the tarsi would be exactly coincident with the ridged under surface of the wing-membrane, so that each stroke of the wings in flight would cause the ridges to pass sharply over the spines and be quite adequate, I think, to produce the clicking sound. The hind tarsi have the ordinary paired spines on the under surface, and I suggest that the fore tarsi can be used to produce the sound, the dilated wing-membrane between the ridges acting as a sounding-board, for which reason it is denuded of scales on both surfaces. The use of the stridulation would be for sexual attraction.

In the closely allied genus *Hecatesia*, from Australia (fig. 2, p. 190), the males have a similar but slightly modified structure; the costal edge of the fore wing is slightly folded over on the under surface of the wing, and beneath this, and further from the base of the wing than in *Egocera*, is a still broader and more dilated area of hyaline wing-membrane; this is longitudinally grooved and thrown into very strong waved ridges on each side of the groove, and in correlation with the different position of the ridged wing-membrane we find that it is the mid tarsi that have the spines strongly developed over the

upper surface, and I suggest that the longitudinal fold acts as a channel for the tarsus, the ridges on each side striking against the spines. Mr. E. Meyrick informs me that this insect makes a loud buzzing sound during flight, and the first time he heard it he thought a "humble-bee" was buzzing round his hat; he tells me that the insect during flight swings rapidly up and down in the air, and he thought the vibration of the air on the membrane might account for the sound.

The only other Lepidoptera known to make a similar clicking

Fig. 2.



Hecatesia fenestrata, Boisd. ♂.

Fore wing.

sound are some of the species of *Ageronia*, e. g. *A. feronia*, *forax*, *amphinome*, and *arethusa*, as was first discovered by Darwin during the voyage of the 'Beagle,' and confirmed by Wallace, and again by Fritz Müller, who says that he also observed it in *Eunica margarita* and a small brown butterfly which he could not capture.

Darwin says that when a pair of *Ageronia feronia* were chasing each other they produced a clicking sound similar to that produced by a toothed wheel passing under a spring catch, and that the noise was produced at short intervals and was audible at twenty yards' distance. Wallace says the noise was never produced by a single specimen, but only when a pair were chasing each other, and he imagined it was in some way produced by the contact of the two insects; but Bigg-Wither noted that the butterfly settled head downwards with its wings outspread, and that if approached it raised its wings sharply once or twice, producing a whip-like sound, and that it also made the same sound while on the wing.

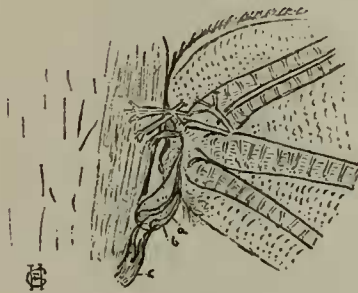
Ed. Doubleday examined the butterfly, and found a small membranous sac between the costal and subcostal nervures of the fore wing, with a structure along the subcostal nervure like an Archimedean screw; he very properly disclaimed this structure being necessarily connected with the sound, and, as Scudder pointed out, these are merely the swollen base of the subcostal nervure found in so many *Nymphalinae* and the tracheal vessel in the nervure.

Swinton says that the sound is produced by the costal nervure of the hind wing, which is ridged like a file, being received into and rubbing against a small depression of the fore wing; but, as Scudder

again pointed out, this was a structure common to all nervures, and the ribbing of the nervures is always strongest near the base of the wings.

Scudder himself suggests that the sound is produced by the small erect scales on the superficies of the two wings that overlap rubbing against each other; but this is obviously inadequate to produce a clicking sound audible twenty yards off, and it is of universal occurrence that in the parts of wings that overlap the scales are short and differently formed, so as to decrease the friction; though the rubbing of the wings one against another might be sufficient to account for the slight rustling or hissing sound made by many of the *Vanessidæ* when held close to the ear.

Fig. 3.



Ageronia arethusa, Cram. ♂.

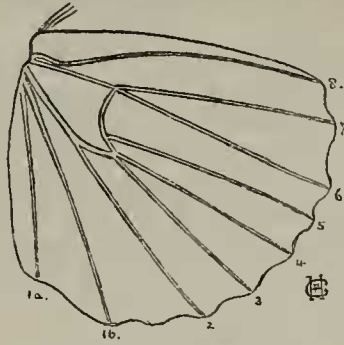
Base of fore wing and part of thorax.

a, pyriform membranous sac attached to fore wing; *b*, chitinous hooks of sac; *c*, chitinous hooks of thorax.

On detaching and clearing a fore wing of *Ageronia arethusa* (fig. 3), I found there was a small pyriform membranous sac attached to the base of the inner margin of the fore wing, open anteriorly, and with a pair of curved chitinous hooks with spatulate extremities lying freely in front of it. It was obvious that this could not come into contact with any of the nervures of the hind wing, and that no structure attached to the hind wing could act on it; and as there seemed to be a projection on the thorax in the immediate neighbourhood, I cleared and denuded of scales a half insect with the wings still attached to the thorax, and could then see under a low power of the microscope that there was a pair of strong chitinous hooks attached to the thorax, and that when the fore wing was moved up and down the spatulate ends of the chitinous hooks attached to the wing played against these, being released when the wing reached a certain angle, and I suggest that this is the cause of the clicking sound, the hooks acting as a tuning-fork and the membranous sac as a sounding-board.

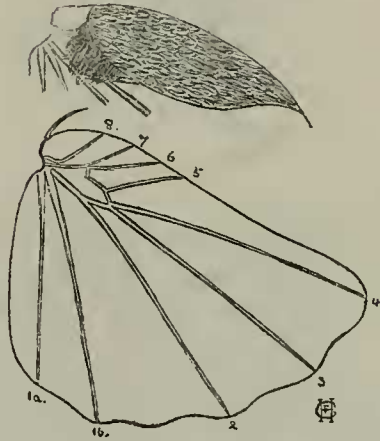
In this case the structure exists in both sexes, and we must conclude that there is a mutual wish to attract, and that perhaps it is also used as a means of inspiring fear, in accordance with Bigg-Wither's

Fig. 4.



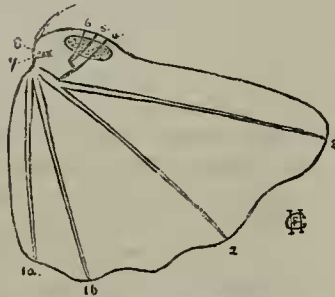
Patula and Argiva. ♀.
Hind wing.

Fig. 5.



Patula macrops. ♂.
Hind wing.

Fig. 6.



Argiva hieroglyphica. ♂.
Hind wing.

experience. I found the structure to be present in *Ageronia feronia* and *arethusia*.

The other structure to which I wish to draw attention is the distortion of the hind wing found in the males of certain *Noctuina* of the subfamily *Ommatophorinæ*, e. g. *Patula macrops* and the various species of the genus *Argiva*, large Moths very common all through the East. In the females of both *Patula* and *Argiva* (fig. 4) the neuration is of the ordinary *Noctuid* character. In the males of *Patula* (fig. 5) there is a very large glandular fold covered with long, silky, closely matted hairs, and with a tuft of long hairs projecting from it, attached to the costa and folded over on the upper surface of the wing, and one notices that instead of the usual nine emarginations of the outer margin there are only five. But it is not till the wing is denuded of scales that we see the nature of the change that has taken place; when this is done, we see that instead of vein 8 going to the apex of the wing it is vein 4 that does so, that the functional apex is really the middle of the outer margin, and that the whole costal half of the wing has been transformed into the glandular fold, carrying the nervures with it, perhaps for purposes of nutrition.

In the males of *Argiva* (fig. 6) we find that this has gone one step further; the fold and glandular patch are very small, but it is vein 3 that goes to the apex and there are only four emarginations of the outer margin, the other veins being represented by small aborted detached fragments near the base.

The glandular fold is almost certainly a scent-organ, and I suggest that *Argiva* once possessed an even larger one than *Patula*, and that this fold, becoming detrimental or useless to it, either from hindering flight or some other cause, has been aborted, carrying the neuration with it.

March 15, 1892.

Prof. Flower, C.B., LL.D., F.R.S., President, in the Chair.

Mr. Arthur Thomson, the Society's Head Keeper, exhibited a series of Insects reared in the Insect-house in the Society's Gardens during the past year, and read the following Report on the subject:—

Report on the Insect-house for 1891.

Examples of the following species of Insects have been exhibited in the Insect-house during the past season:—

Silk-producing Bombyces and their Allies.

Indian.

Attacus atlas.
 — *cynthia.*
 — *pernyi.*

Antheræa mylitta.
Actias selene.
Cricula trifenestra.

American.

Samia cecropia.
Telea polyphemus.
 — *promethea.*

Hypocheira io.
Actias luna.

Diurnal Lepidoptera.

European.

Papilio podalirius.
 — *machaon.*
 — *alexanor.*
 * — *maackii.*
 * *Sericinus telamon.*
Thais polyxena.
 * — *cerisyi*, var. *deyrollei.*
 * *Doritis apollinus.*
Farnassius apollo.
Anthocharis cardamines.
 * — *eupheno.*

Lycæna iolas.
 — *corydon.*
Vanessa levana.
 — *polychlorus.*
 — *urticæ.*
 — *io.*
Argynnis aglaia.
Melitæa cinxia.
Melanargia galathea.

American.

Papilio ajax.
 — *asterias.*

Papilio cressphontes.
Limenitis disippus.

Nocturnal Lepidoptera.

Smerinthus ocellatus.
 — *tiliæ.*
 — *populi.*
Sphinx ligustri.
Deilephila euphorbiæ.
 — *galii.*
 * — *nicæa.*
 * — *alecto.*

Saturnia pyri.
 — *carpini.*
Gonomita postica.
Eacles regalis.
 — *imperialis.*
 * *Anisota stigma.*
 * *Tricæna maxima.*

Of the insects which I have the honour to place before the Meeting this evening the following are exhibited for the first time, viz. :—*Papilio maackii* and *Sericinus telamon* from Eastern Siberia ; *Thais cerisyi*, var. *deyrollei*, and *Doritis apollinus* from Syria ; *Anthocharis eupheno* and *Deilephila nicæa* from the South of France ; *Deilephila alecto* from Syria ; *Anisota stigma* from N. America ; and *Tricæna maxima* from India.

The specimens of *Deilephila nicæa* and *Deilephila alecto* were reared from pupæ deposited in the Insect-house by the Hon. Walter Rothschild, F.Z.S. The specimen of *Tricæna maxima* is the only one that emerged from several pupæ kindly sent by Mr. J. G. Gammie, of Monghoo, Kurseong, near Darjeeling, through Mr. W. L. Selater, F.Z.S. With these pupæ many other pupæ and cocoons were sent, but I am sorry to say nearly all emerged *en route*. Amongst those that arrived in good condition were some cocoons of *Cricula trifenestrata*, from which moths emerged in due course.

* Exhibited for the first time.





Pairings took place, and for the first time I succeeded in rearing the larvæ and obtaining a second brood of this species. The larvæ were very handsome and were reared upon whitethorn. I also succeeded in rearing the larvæ of *Eacles imperialis*, and the pupæ (3) in the Insect-house are alive and healthy. I had also the larvæ of *Eacles regalis*, but these I did not succeed in rearing.

Owing to the cold and wet summer of last year collecting was very difficult, and many species which I have generally easily obtained are absent from this list in consequence.

Mr. Sclater exhibited a flat skin of the Wild Ass of Somali-land (*Equus asinus somalicus*), taken from a specimen shot by Mr. J. D. Inverarity, about fifty miles from Berbera, about eighteen months ago, and made the following remarks:—

“Mr. Inverarity has kindly sent me the skin of the Wild Ass of Somali-land (*Equus asinus somalicus*), which I now exhibit. It will be observed that the present specimen differs from that previously described and figured (P. Z. S. 1884, p. 542, pl. 50) in having slight shoulder-stripes, as well as a dorsal stripe. The shoulder-stripe on the off side is the more distinct of the two. The general colour of the skin is also not of so deep a grey tint. All the four feet are banded as in the former specimen.”

Mr. Henry Seebohm exhibited four examples (two males and two females) of *Picus richardsi* from the island of Tsu-sima in the Straits of Corea, and pointed out that one of them had more white at the tips of the primaries than has yet been found in examples from Corea. As this is the only alleged difference between *P. richardsi* and *P. kalinowskii*, the latter name, being the most recent, must be henceforth regarded as a synonym of the former.

Mr. Oldfield Thomas exhibited a mounted head of the East-African Antelope hitherto referred to *Oryx beisa*, Rüpp., but which he considered to represent a new species.

The specimen described was from the neighbourhood of Mount Kilimanjaro, and had been generously presented to the National Museum by Messrs. Rowland Ward and Co., of Piccadilly.

The species was proposed to be called

ORYX CALLOTIS, sp. n. (Plate XIV.)

Size of *O. beisa*; horns as in that species, but very slightly curved backwards. Ears long, their tips sharply pointed, and ornamented with a prominent black tuft, the hairs of which are from two to three inches in length. Ground-colour of face between the black markings rich fawn, as dark as the sides of the neck, except just round the muzzle, where the colour is white. Arrangement of markings much as in *O. beisa*, except that the black line passing through the eye runs further down under the throat and in some specimens,

as for example in the type, unites below the ramus of the mandible into that running down from the ear, those of both sides uniting again on the throat. Throat apparently without a tuft.

Oryx beisa and *O. gazella*, the only two species at all allied to *O. callotis*, both have their ears broadly rounded and quite short-haired at the tips, and both have the ground-colour of the face white, characters which readily separate both of these from the species now described. On the whole *O. callotis* is more nearly allied to *O. beisa*, *O. gazella* being distinguished from both of them by its throat-tuft, its larger and more widely expanded horns, and the different characters of its face-markings.

The type specimen has horns $23\frac{1}{2}$ and 22 inches in length, but the horns are frequently much larger. Sir John Willoughby¹ says, "The horns of a female measure from thirty to thirty-two inches; those of the male are thicker, but a few inches shorter."

Mr. Thomas expressed the hope that complete specimens of this handsome inhabitant of the Imperial British East African Company's territory would soon be obtained for the National Collection.

The following papers were read:—

1. On the Orthoptera of the Island of St. Vincent, West Indies. By C. BRUNNER v. WATTENWYL and Professor J. REDTENBACHER².

[Received February 17, 1892.]

(Plates XV.—XVII.)

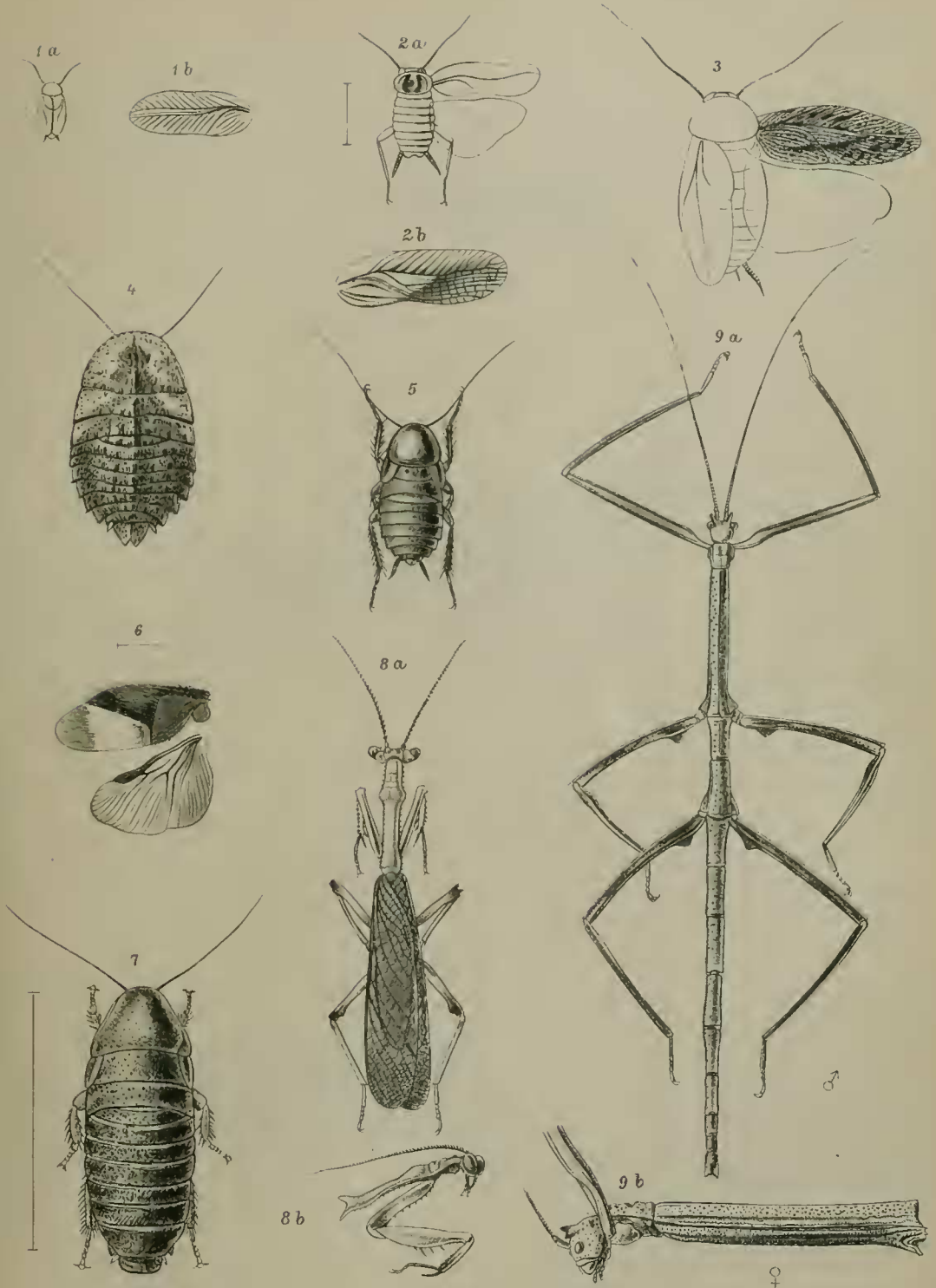
At the request of the joint Committee appointed by the British Association and by the Royal Society to investigate the Fauna and Flora of the West Indian Islands, Herr Hofrath Carl Brunner von Wattenwyl has been so good as to undertake the examination of the Orthoptera obtained in the Island of St. Vincent by Mr. H. H. Smith, the naturalist sent thither by Mr. F. D. Godman, F.R.S., to assist the operations of the Committee.

Herr Brunner obtained the help of Prof. J. Redtenbacher, and the present memoir gives the result of their study of the material submitted to them.

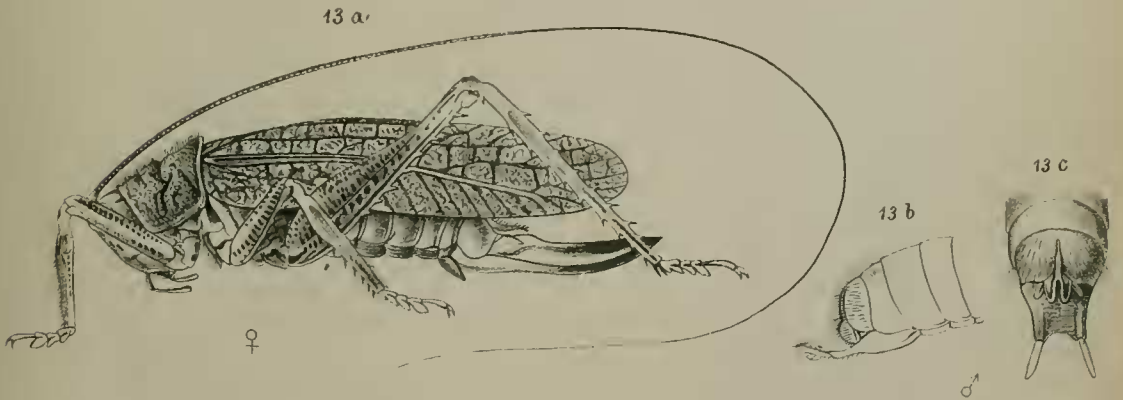
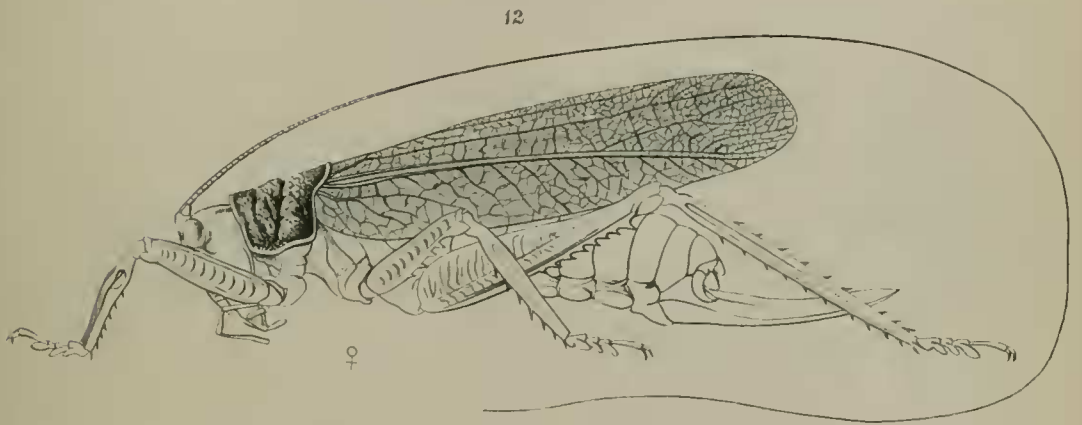
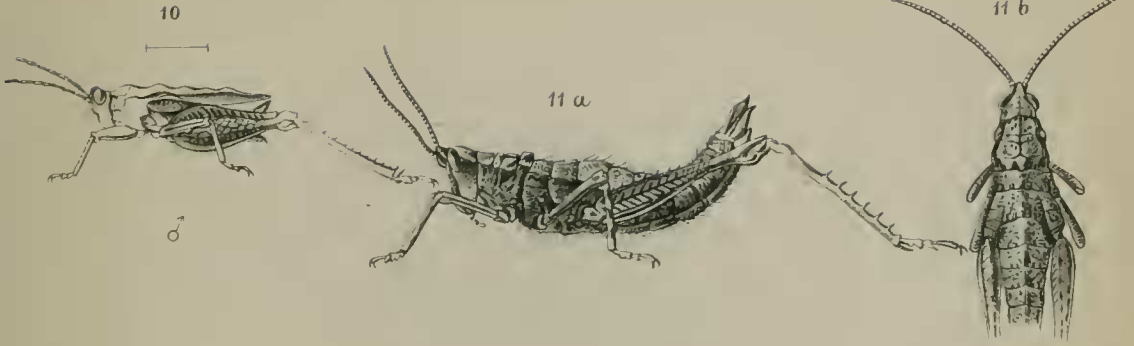
Herr Brunner, when sending to me the MS. of this paper, requested me to write an introductory notice in our own language; I have complied with his wish with the greater pleasure as giving me an opportunity on behalf of the Committee of publicly thanking him, as well as Prof. Redtenbacher, for the careful study they have made of these insects. I have also been able to supplement

¹ 'East Africa and its Big Game,' p. 238 (1889).

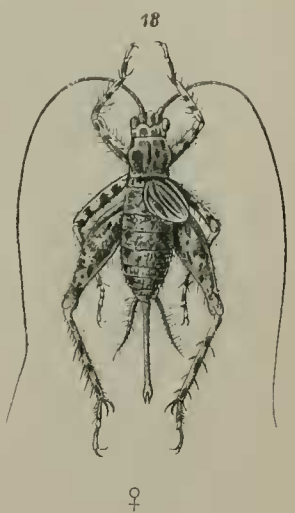
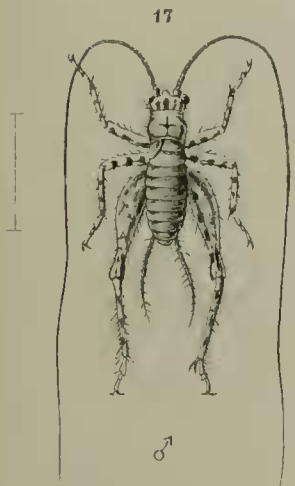
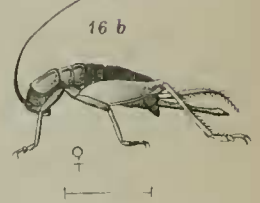
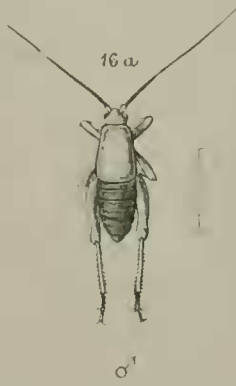
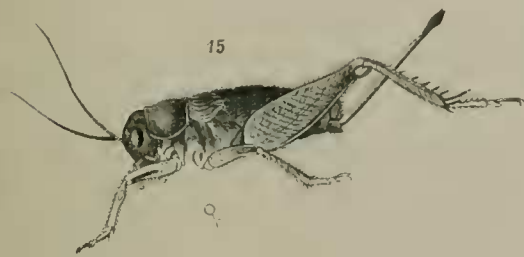
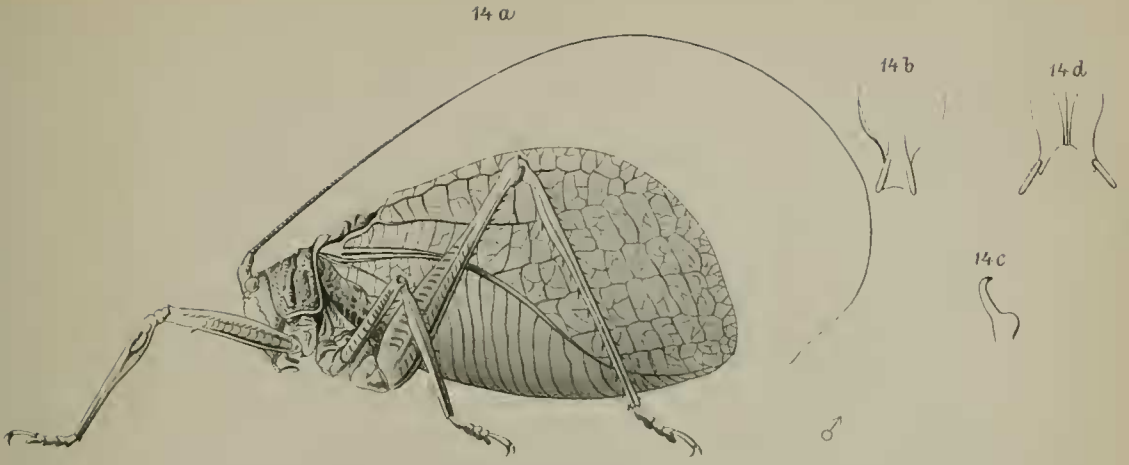
² [Communicated by Dr. D. SHARP, F.R.S., F.Z.S., on behalf of the Committee for investigating the Fauna and Flora of the West Indian Islands.]











the information given in Latin by Herr Brunner, as to localities at which the species have been observed, by some memoranda communicated to me by the collector, Mr. H. H. Smith, to which his initials are appended.

The collection numbers in all 62 species, of which 19 appear to be peculiar to the island, 17 of these being here for the first time named and described.

All the great divisions of the Orthoptera are represented, and in what may roughly be called the usual proportions, except in one respect, viz. the paucity of *Acridiodes*.

The island appears to be favourable for the existence of Orthoptera, and, as it contains a variety of conditions, the number of species must be looked on as small compared with what would be found in a similarly varied area of equal extent in Central or Tropical America. What the true difference in this respect may be—whether the comparative poverty of St. Vincent is great or small—I cannot say, as I am not aware that the Orthoptera of any one district of Equatorial or of Central America have been anything like completely worked up.

Except in the two points I have just alluded to I do not perceive any points of peculiarity in the Orthopterous fauna of St. Vincent. The proportion of apterous to winged species seems to be about as usual, and the number of cosmopolitan or very widely distributed species is but small.

I have drawn up a table in order to display the distribution of the species outside of the island. From this it will be gathered that 29 of the 62 occur in other of the W. Indian Islands, 34 have been found also in South or Central America, 6 exist in N. America, and 3 have a wide distribution. Of the 26 species found in other W. Indian Islands (not including the cosmopolitan forms) the majority occur in Cuba, no less than 20 of the 26 being already known to be found there.

There is nothing to indicate that these Orthoptera have been distributed by other means than those that occur in the case of continental regions; and Messrs. Brunner and Redtenbacher make no remarks that would lead us to suppose that they are modified or varietal forms: the species that are known from elsewhere are not alluded to as varieties, and the forms that are described as peculiar are apparently distinguished by characters of normal specific value.

In reference to the comparative poverty of the island in species, it might be suggested (by those who take it for granted that the fauna of the island is an entirely derived one) that this poverty is due to the fact that not all the species that could find subsistence in the island have been able to make their way thither. But it appears at least equally probable that the poverty may be due to the restricted range that the small area of the island affords to its inhabitants.

The paucity of *Acridiodes* I see no way of comprehending with any certainty; but as this division is not only the most numerous in species elsewhere, but is also the one in which activity is as a

rule greatest, it may be that the restricted range is in their case specially unfavourable. The genus *Schistocerca* includes two of the six species of St.-Vincent *Acridiodea*; and this genus is remarkable as comprising one of the few migratory locusts that at times devastate regions of the Old World; the genus is, however, specially an American one and it is supposed that the *S. peregrina*, Ol.—the migratory locust I am speaking of—is an American insect that made its way to Africa. It is worthy of note that it is not this *Schistocerca* with great powers of flight and self-distribution that is found in St. Vincent, but two other species, one of which has a wide distribution in the Antilles and in the continental lands adjacent, while the other has been hitherto only found in Cuba, Haiti, and Jamaica, so that both are endemic species of the region in which St. Vincent is situated.

The Orthopterous fauna of St. Vincent appears to point out that it is not powers of locomotion that have established certain species in the island and excluded others, for the earwigs, which are remarkable from their very feeble powers of flight, are proportionally better represented in the fauna than the *Acridiodea*, whose powers of locomotion are notoriously great. Of the nineteen species appearing at present peculiar to the island eleven are apterous, and only eight winged species. It must not, however, be taken for granted that these nineteen species will ultimately prove to be absolutely limited to the island of St. Vincent. We may indeed feel pretty sure that some of them will be found in the neighbouring islands, and until these have been explored it would be premature to attach much importance to the fact that the majority of the species peculiar to the island are incapable of flight. It should also be remarked in reference to these nineteen species that most of them appear to be extremely rare, indeed in the case of seven of them only a single specimen of each has been obtained.

The most remarkable of these Orthoptera is *Diapherodes gigas*, the female of which is a gigantic apterous insect, 7 or 8 inches in length. Another of the most interesting of the Orthoptera of the island is the *Cyrtophyllus crepitans*; this is one of the singing Locustidæ, allied to the N. American "Katydid," and is provided with a powerful musical apparatus. The most abundant Orthopteron appears to be *Orphula punctata*; this is a comparatively small insect, extremely similar to the *Stenobothri* that are so numerous in our European fields and commons; it has, however, no stridulating organ. The common earwig of the island appears to be *Anisolabis janeirensis*.

(D. S.)

*List of the Orthoptera of St. Vincent, with Indications of their
Distribution outside the Island.*

	Other Antilles.	S. America & Centr. America.	N. America.	More general.	Remarks.
DERMAPTERA.					
1. <i>Labia arcuata</i> , <i>Scud.</i>	0	+	0	0	
2. — <i>rotundata</i> , <i>Scud.</i>	0	+	0	0	
3. — <i>brunnea</i> , <i>Scud.</i>	+	0	0	0	
4. — <i>pulchella</i> , <i>Serv.</i>	0	0	+	0	Niagara.
5. <i>Anisolabis janeirensis</i> , <i>Dohrn</i> ...	0	+	0	0	Apterous.
6. — <i>maritima</i> , <i>Bon.</i>	+	+	+	+	Apterous; introduced by commerce?
BLATTODEA.					
7. <i>Anaptyeta</i> (n. gen.) <i>bipunctulata</i> (n. sp.)	0	0	0	0	Three specimens obtained.
8. <i>Phyllodromia adspersicollis</i> , <i>Stål.</i>	+	+	0	0	
9. — <i>delicatula</i> , <i>Guér.</i>	+	0	0	0	Cuba.
10. <i>Pseudophyllodromia semivitrea</i> (n. sp.)	0	0	0	0	One example only.
11. <i>Epilampra brevis</i> (n. sp.)	0	+	0	0	Cayenne.
12. <i>Homalopteryx laminata</i> (n. sp.)..	0	0	0	0	Apterous; rare.
13. <i>Stilopyga antillarum</i> (n. sp.)	0	0	0	0	Apterous; one example only.
14. <i>Panchlora viridis</i> , <i>Burm. (?)</i>	+	+			
15. <i>Leucophaea surinamensis</i> , <i>L.</i>	+	+	+	+	Cosmopolitan.
16. — <i>maderæ</i> , <i>Fabr.</i>	+	+	+	+	Cosmopolitan.
17. <i>Holocompsa collaris</i> , <i>Burm.</i>	+	+	0	0	
18. <i>Parasphæria nigra</i> (n. sp.)	0	0	0	0	Apterous; rare.
MANTODEA.					
19. <i>Musonia surinama</i> , <i>Sauss. ?</i>	0	+	0	0	One example.
20. <i>Parastagmatoptera lobipes</i> , n. sp.	0	0	0	0	One example.
PHASMODEA.					
21. <i>Phanocles curvipes</i> , n. sp.	0	0	0	0	Apterous; rare.
22. <i>Bacteria cyphus</i> , <i>Westw.</i>	0	0	0	0	Apterous; rare.
23. — <i>linearis</i> , <i>Drury</i>	+	0	0	0	Antigua.
24. <i>Diapherodes gigas</i> , <i>Drury</i>	+	0	0	0	Guadeloupe.
ACRIDIODEA.					
25. <i>Orphula punctata</i> , <i>de Geer</i>	0	+	0	0	Very common.
26. <i>Tettix quadriundulatus</i> , n. sp. ...	0	0	0	0	♀ almost apterous.
27. <i>Vilerua æneo-oculata</i> , <i>de Geer</i> ...	0	+	0	0	
28. <i>Caletes</i> (n. g.) <i>apterus</i> , n. sp. ...	0	0	0	0	Apterous; scarce.
29. <i>Schistocerca pallens</i> , <i>Thunb.</i>	+	0	0	0	One example.
30. — <i>columbina</i> , <i>Thunb.</i>	+	+	0	0	

TABLE (continued).

	Other Antilles.	S. America & Centr. America.	N. America.	More general.	Remarks.
LOCUSTODEA.					
31. <i>Anaulacomera laticauda</i> , Brun...	0	+	0	0	
32. <i>Microcentrum pallidum</i> , Brun....	+	+	0	0	
33. <i>Stilpnochlora marginella</i> , Serv. ...	+	+	0	0	
34. <i>Bliastes superbus</i> , n. sp.....	0	0	0	0	Winged.
35. — <i>striolatus</i> , n. sp.....	0	0	0	0	Winged.
36. <i>Cyrtophyllus crepitans</i> , n. sp. ...	0	0	0	0	Winged.
37. <i>Copiophora brevicornis</i> , Redt. ...	0	+	0	0	
38. <i>Conocephalus guttatus</i> , Serv....	+	+	0	0	
39. — <i>muticus</i> , Redt.	+	0	0	0	Cuba.
40. — <i>maxillosus</i> , Fabr.	+	+	0	0	
41. — <i>infuscatus</i> , Scud.	+	+	0	0	
42. — <i>frater</i> , Redt.	+	+	0	0	
43. — <i>heteropus</i> , Bol.	0	+	0	0	
44. — <i>macropterus</i> , Redt. ..	+	+	0	0	
45. — <i>punctipes</i> , Redt.....	0	0	0	0	
46. — <i>surinamensis</i> , Redt.	0	+	0	0	
47. <i>Xiphidium saltator</i> , Sauss.....	+	+	0	0	
48. — <i>propinquum</i> , Redt.	0	+	0	0	
49. <i>Pherterus cubensis</i> , de Huan.....	+	+	0	0	
GRYLLODEA.					
50. <i>Gryllotalpa hexadactyla</i> , Perty...	0	+	0	0	
51. <i>Scapteriscus didactylus</i> , Latr. ...	+	+	0	0	
52. <i>Tridactylus minutus</i> , Scud.	0	0	+	0	Maritime.
53. <i>Anurogryllus muticus</i> , de Geer ...	+	+	0	0	
54. <i>Gryllus assimilis</i> , Fabr.	+	+	+		
55. <i>Gryllodes rufipes</i> , n. sp.....	0	0	0	0	Apterous ; unique.
56. <i>Ectatoderus antillarum</i> , n. sp. ...	0	0	0	0	Apterous.
57. <i>Larandus marmoratus</i> , n. sp. ...	0	0	0	0	Apterous ; unique.
58. <i>Endacustes dispar</i> , n. sp.	0	0	0	0	Apterous ; unique.
59. <i>Cyrtoxiphus vittatus</i> , Bol.	+	0	0	0	Cuba.
60. — <i>gundlachi</i> , Sauss.	+	+	0	0	
61. <i>Orocharis gryllodes</i> , Pall.	+	+	+	0	Cuba.
62. <i>Metrypus luridus</i> , Sauss.	+	0	0	0	

I. Ordo DERMAPTERA.

(Auctore A. DE BORMANS.)

Genus LABIA, Leach.

1. *L. ARCUATA*, Scudder.

Labia arcuata, Scudd. 1879, A Century of Orthoptera, p. 36 ;
Proceed. of the Boston Soc. of Nat. Hist. vols. xii.—xx.

Patria : St. Vincent, leeward side.—Specimina compluraria, collecta
sub ligno putrido, stercore, etc. mensibus Januar. et April. in Rich-

mond Valley, 1200'.—Occurrit etiam in Brasilia (*Scudd.*), Columbia et Peru (*coll. Brunner*).

Also at Châteaubelais, Lot 14 Estate. Kingstown old Botanic garden.—*H. H. S.*

2. *L. ROTUNDATA*, Scudder.

Labia rotundata, Scudd. *ibidem*, p. 42.

Patria: St. Vincent, leeward side, prope Kingstown et Richmond Valley 1200'.—Specimina compluria, collecta sub lignis, mensibus Januario et Octobri.—Occurrit etiam in Mexico (*Scudd.*, *coll. Brunner*).

Also at Baronallie; found on several occasions near the sea.—*H. H. S.*

3. *L. BRUNNEA*, Scudder.

Labia brunnea, Scudd. *ibidem*, p. 43.

Patria: St. Vincent, windward side.—Specimina compluria.—Occurrit etiam in Cuba (*Scudd.*, *coll. Brunner*).

Found in the forest on the W. slope of the Soufrière at an elevation of 1500 ft., also on Lot 14 Estate.—*H. H. S.*

4. *L. PULCHELLA*, Serville.

Forficula pulchella, Serv. 1839, *Hist. nat. des Ins. Orthoptères*, p. 42.

Patria: St. Vincent, prope Richmond Valley (1100') et Bow-wood Valley (800').—Specimina compluria, collecta sub lignis, mensibus Decembri, Januario, et Octobri.—Occurrit etiam in America septentrionali, Niagara (*Serv.*).

Genus ANISOLABIS, Fieber.

1. *A. JANEIRENSIS*, Dohrn.

Forcinella janeirensis, Dohrn, 1864, *Monogr. d. Dermapteren*, Stettin. ent. Zeit. p. 285.

Patria: St. Vincent, leeward side, prope Richmond Valley (1200'), Bow-wood, prope Kingstown.—Specimina numerosa, collecta sub lignis et frondibus, in fruticibus, mensibus Januario et Octobri.—Occurrit etiam in Brasilia, Rio de Janeiro (*Dohrn*; *coll. Brunner*), St. Catharina (*coll. Brunner*).

This is the most abundant earwig in the islands, and was very frequently met with.—*H. H. S.*

2. *A. MARITIMA*, Bonelli.

Forficula maritima, Bon., Gené, 1862, *Monograph. Forfic.* p. 9.

Patria: St. Vincent, prope Bow-wood Valley (800').—Specimina duo juvenilia, collecta in silvis sub lignis putridis mense Octobri.—Species cosmopolitica, indigena in confinibus Mediterraneis; occurrit etiam in Japan, Haïti, Cayenne, Columbia, Buenos Aires, New Orleans (*coll. Brunner*).

II. Ordo ORTHOPTERA GENUINA.

1. Familia BLATTODEA.

(Auctore C. BRUNNER v. WATTENWYL.)

Tribus ECTOBIIDÆ.

Genus ANAPTYCTA, Brunner (gen. nov.).

(ἀνά=retro; πτυκτός=plicatus.)

Caput magnum. Oculi remoti. Pronotum suborbiculare, postice subtruncatum, latere deflexum. Elytra abdomen vix superantia, venis distinctis, vena radiali ramos parallelas in marginem anticum, vena ulnari ramos parallelas in marginem posticum elytri, emittentibus. Alæ in modum generis Anaplectæ plicatæ. Femora subtus inermia.

Differt a genere *Anaplecta*, Burm.: elytrorum vena ulnari ramos pectinatos in marginem posticum emittente, femoribus subtus inermibus.

1. A. BIPUNCTULATA, Brunner (n. sp.). (Plate XV. fig. 1.)

Parva, colore pallide testaceo. Pronotum disco punctis duobus ferrugineis, vix perspicuis, ornatum. Pedes pallidi. Sexus?

Long. corp.....	7	millim.
„ elytr.....	6	„
„ pronot.....	2	„
Lat. „	2.5	„

Patria: St. Vincent, leeward side.—Specimina tria.

Two specimens were beaten from branches, at an elevation of 1000 ft., in the forest above Châteaubelais in September. The third has no locality.—H. H. S.

Tribus PHYLLODROMIDÆ.

Genus PHYLLODROMIA, Serv.

1. P. ADSPERSICOLLIS, Stål.

Phyllodromia adpersicollis, Stål, 1861, Freg. Eugenies Resa, Zool. v. p. 308.

Patria: St. Vincent, windward side.—Specimina præsentia compluria differunt colore nitido-ferrugineo.—Occurrit etiam in Cuba, Guantanamo (*Bolivar*), Brasilia (*Stål*), Mexico (*coll. Brunner*).

Lot 14 Estate: Châteaubelais.—H. H. S.

2. P. DELICATULA, Guérin.

Phyllodromia delicatula, Guérin, Sagra, Hist. de Cuba, 1856, p. 346.

Patria: St. Vincent, windward et leeward side.—Specimina compluria.—Occurrit etiam in Cuba (*Guérin*).

Lot 14 Estate: Châteaubelais.—H. H. S.

Genus PSEUDOPHYLLODROMIA, Brunner.

Hoc genus in unam speciem Philippinicam instructum, multas species Americanas comprehendit, quarum singulas de Saussure descripsit (Miss. scientif. au Mexique, p. 42).

1. P. SEMIVITREA, Brunner (n. sp.). (Plate XV. fig. 2.)

Caput testaceum, vitta fusca inter oculos signatum. Antennæ nigrae. Pronotum valde transversum, marginibus lateralibus late hyalino-testaceis, disco flavo, vittis duabus longitudinalibus nigris, lyrato-curvatis, necnon vitta breviora media. Elytra hyalino-testacea, venis fuscis, pone medium macula obliqua fusca ornata. Alæ hyalinae, levissime infumatae, venis fuscis, vena ulnari ramos duos in apicem alæ emittente. Pedes pallide testacei, fusco-marginati. Abdomen fuscum. Cerci fusci. Lamina supra-analis ♀ transversa, leviter rotundata. Lamina subgenitalis ♀ rotundato-emarginata. ♀.

Long. corp.	7	millim.
„ elytror.	8	„
„ pronot.	1·9	„
Lat. „	2·8	„

Patria: St. Vincent, windward side.—Specimen unicum. Found near Lot 14 Estate in April.—H. H. S.

Tribus EPILAMPRIDÆ.

Genus EPILAMPRA, Burm.

1. E. BREVIS, Brunner (n. sp.). (Plate XV. fig. 3.)

Statura minore, colore testaceo. Caput magnum. Antennæ testaceæ. Oculi valde remoti. Vertex infuscatus. Frons pallida. Pronotum caput liberans, totum leve, minutissime fusco-conspersum, latere deflexo. Elytra in ♂ apicem abdominis parum superantia, in ♀ hoc æquantia, minute fusco-conspersa, punctis impressis nullis. Alæ hyalinae, venis pallide testaceis, margine antico testaceo-afflato. Pedes testacei, levissime fusco-marginati. Abdomen fuscum. Lamina supra-analis ♂ levissime rotundato-emarginata. Lamina supra-analis ♀ plicata, sed vix emarginata. Lamina subgenitalis ♂ utrinque stylo instructu. ♂ ♀.

	♂	♀
Long. corp.	20 millim.	23·5 millim.
„ pronot.	5 „	7 „
Lat. „	7·5 „	8·7 „
Long. elytr.	17 „	19 „

Patria: St. Vincent, windward side.—Specimina compluria.—Occurrit etiam in Cayenne (coll. Brunner). Lot 14 Estate in April.—H. H. S.

Genus HOMALOPTERYX, Brunner.

1. *H. LAMINATA*, Brunner (n. sp.). (Plate XV. fig. 4.)

Fusco-testacea. Aptera, plana. Pronotum oblongo-semiorbiculare, caput valde superans, supra caput leviter cucullatum, rugulis et granulis rugosum, margine postico, cum segmentis ceteris omnibus, rugulis regularibus obsito, meso- et metasternum latere in dentem productum. Pedes breves. Segmenta abdominis dorsalia latere in dentem producta. Cerci minimi, pallidi, apice ipso nigri. Lamina supra-analis ♀ triangulariter producta, apice triangulariter emarginata. Lamina subgenitalis ♀ rotundato-producta. ♀.

Larva ♂ non differt a feminis, exceptis meso- et metanoto lobatis, qua de causa certe imagines alatae sunt.

Long. corp. ♀	.....	26	millim.
„ pronot.	.....	7·8	„
Lat. „	.....	12·8	„

Patria: St. Vincent, windward side.—Specimina nonnulla, feminae adultae, mares imperfecti.—Haec species Homalopterygi capucinae, Br. (Nouv. Syst. des Blattaires, p. 196), affinis est. Feminae hujus speciei ignotae.

Lot 14 Estate; Châteaubelais; also in the Forest at an elevation of 2000 ft. in decaying leaves.—H. H. S.

Tribus PERIPLANETIDÆ.

Genus STYLOPYGA, Fischer de W.

1. *S. ANTILLARUM*, Brunner (n. sp.). (Plate XV. fig. 5.)

Parva, oblongo-rectangularis (abdomine haud dilatato) picea, nitida. Caput globosum, excepto labro, atrum. Oculi magis inter se remoti quam scrobes antennarum. Pronotum parabolicum, levissimum. Elytra lobiformia, lateralia, mesonotum haud superantia. Metanotum cum segmentis abdominis marginibus lateralibus levissime reflexis. Pedes graciles. Metatarsus posticus ceteris articulis unitis longior. Pulvilli minutissimi. Cerci nigri. Lamina supra-analis ♀ transversa, angustissima, rotundata. ♀.

Long. corp.	.....	16	millim.
„ elytr.	.....	2·5	„
„ pronot.	.....	4·6	„
Lat. „	.....	6·5	„

Patria: St. Vincent, W. I.—Specimen unicum.—Differt a St. orientali, L., statura oblongo-rectangulari, elytris mesonotum haud superantibus, lamina supra-anali ♀ transversa.

Leeward, in the Forest under rotting leaves on the banks of a stream at an elevation of 500 ft.—H. H. S.

Tribus PANCHLORIDÆ.

Genus PANCHLORA, Burm.

Species totæ virides hujus generis difficillime distinguuntur. Diagnoses in opere 'Nouv. Syst. des Blattaires' non sufficiunt: præcipue species *exoleta*, Klug, *viridis*, Burm., et *nivea*, L., confunduntur.

1. P. VIRIDIS, Burm. (?).

Panchlora viridis, Burm. 1839, Handbuch, ii. p. 506; Brunner, l. c. p. 273.

Patria: St. Vincent, leeward side (300').—Specimina compluria, collecta vespere mense Januario.—Occurrit etiam in Cuba et America meridionali (*coll. Brunner*).

Golden grove, flew to light on Jan. 29th; also at Baronallie and Châteaubelais.—*H. H. S.*

Genus LEUCOPHÆA, Brunner.

1. L. SURINAMENSIS, L.

Blatta surinamensis, L. 1766, Syst. Nat. p. 687.

Panchlora surinamensis, Brunner, Nouv. Syst. d. Blatt. p. 278.

Patria: St. Vincent, windward side.—Specimina duo.—Species cosmopolitana.

Lot 14 Estate.—*H. H. S.*

2. L. MADERÆ, Fabr.

Blatta maderæ, Fabricius, 1792, Ent. Syst. ii. p. 6.

Panchlora maderæ, Brunner, Nouv. Syst. d. Blatt. p. 282.

Patria: St. Vincent.—Species cosmopolitana, cognita ex Cuba, Brasilia, insulis Canariensibus, insula Madera, Senegal, Java et insulis Philippinicis.—Specimen unicum.

Lot 14 Estate in May.—*H. H. S.*

Tribus CORYDIIDÆ.

Genus HOLOCOMPSA, Burm.

1. H. COLLARIS, Burm. (Plate XV. fig. 6.¹)

Corydia collaris, Burmeister, 1839, Handb. ii. p. 492.

Holocompsa collaris, Brunner, Nouv. Syst. d. Blatt. p. 347.

Patria: St. Vincent, windward side.—Specimen unicum.—Occurrit etiam in Cuba (*Guérin*), Brasilia (*coll. Brunner*).

Lot 14 Estate in April.—*H. H. S.*

¹ Imago, quoad alas, in opere 'Nouv. Syst. des Blattaires,' tab. x. fig. 50, falsa est.

Tribus PERISPHERIIDÆ.

Genus PARASPHÆRIA, Brunner.

1. *P. NIGRA*, Brunner (n. sp.) (Plate XV. fig. 7.)

Picea, raro punctata. Uterque sexus clytris lobiformibus, lateralibus, corpori concoloribus, margine externo limbato. Pedes rufo-fusci. Tarsi breves. Metatarsus ceteris articulis unitis triplo brevior. Pulvilli articulorum omnium per totam longitudinem extensi. ♂ ♀.

Larvæ marginem versus pallidiores, pedibus fusco-testaceis.

Long. corp.	♂	22	millim.	♀	33	millim.
„ pronot.		7·5	„		8·5	„
Lat. „		10	„		12	„
Long. elytr.		3·5	„		4·5	„

Patria: St. Vincent, windward side, leeward side.—Specimina nonnulla.—Hæc species differt ab omnibus congenericis utroque sexu subaptero necnon tarsis brevioribus.

Lot 14 Estate; also on the W. slope of the Soufrière volcano at an elevation of 1500 ft. under rotting fruit in September.—*H. H. S.*

2. Familia MANTODEA.

(Auctore J. REDTENBACHER.)

Tribus MANTIDÆ.

Genus MUSONIA, Stål.

1. *M. SURINAMA*, Saussure (?).

Thespis surinama, Sauss. 1871, Mém. Mex. 2, 1, p. 129.

Musonia surinama, Stål, 1877, Syst. Mantod. p. 66.

Patria: St. Vincent, windward side.—Specimen unicum, imperfectum, propterea difficiliter determinandum.—Hæc species occurrit in Surinam et Venezuela (*Stål*).

Lot 14 Estate in September.—*H. H. S.*

Tribus VATIDÆ, Stål.

Genus PARASTAGMATOPTERA, Sauss.

1. *P. LOBIPES*, Redt. (n. sp.) (Plate XV. fig. 8.)

Viridi-flavescens. Oculi rotundati. Prothorax gracilis, supra coxas anticas valde ampliatas, margine laterali nigro-denticulato. Elytra hyalina, elongata, reticulo beryllino, campo antico basi dilatato, viridi, opaco, coriaceo. Alæ vitrea, margine antico virescente. Antennæ ♂ valde serrate. Coxæ antice validiores, apice superne valde dilatato intusque macula lata nigra ornate. Femora antica valida, intus spinis alternatim nigris et pallidis (apice tantum fuscis) instructa. Femora quatuor postica apice

cum basi tibiæ infuscata, ante apicem subtus lobo distincto infuscato instructa. ♂.

Long. corpor.	38	millim.
„ pronot.	14·3	„
„ elytror.	29·8	„
„ fem. ant.	10·5	„
„ fem. post.	10·5	„

Patria: St. Vincent, south end.—Specimen unicum, collectum in fruticibus mense Septembri.

Hæc species maxime affinis *Parastagmatoptera flavoguttatæ* (Serv. Hist. Nat. d. Ins. Orth. p. 183, et Saussure, Mém. Mex. iv. p. 84), quæ occurrit in Brasilia, Republica Argentina (*Sauss.*) et Venezuela (*Serv.*). Differt: prothorace supra coxas valde ampliato, femoribus 4 posticis ad apices infuscatis, singulo subtus lobo distincto instructo.

3. Familia PHASMODEA.

Genus PHANOCLES, Stål.

1. *P. CURVIFES*, Redt. (n. sp.). (Plate XV. fig. 9.)

Fusco-griseus vel griseo-cinereus. Antennæ longæ, interdum dilute et remote fusco-annulatæ. Articulus primus antennarum haud ampliatus, marginibus parallelis, oculis sesquolongior. Dorsum capitis bicornutum, cornu apice compresso, inequaliter bidentato. Corpus totum albido-granulosum, granulis, præsertim in ♂, minutis. Elytra alæque nulla. Segmentum medianum metanoto longius. Mesonotum leviter carinatum. Abdominis segmenta 3 et 4 postice in medio tuberculo depresso, in ♂ obsolete, instructa. Segmentum dorsale 6 in utroque sexu duobus sequentibus, simul sumptis, longius. Segmentum ultimum ♂ gracile. Femora 4 postica cum tibiis distincte curvata, sæpe dilute et late fusco-fasciata. Femora et tibiæ carinis omnibus subtiliter et confertim spinulosis. Femora 4 postica subtus prope basin in ♂ valde lobiformiter, in ♀ multo minus laminato-dilatata. Metatarsus superne compressus, haud lobatus, articulis reliquis simul sumptis subæqualis. Cerci ♂ breves, acuminati, teretes. ♂ ♀.

	♂	♀
Long. corp.	83-84	millim. 160
„ pronot.	3·4	„ 5·8
„ mesonot.	18	„ 34
„ metanot.	5·7	„ 10
„ seg. med.	7·3	„ 14·6
„ fem. ant.	22·7	„ 39
„ fem. post.	21·5	„ 36·3

Patria: St. Vincent, windward side, leeward side prope Cumberland (500').—Specimina nonnulla, collecta in silvis aridis mense Septembri.

Hæc species valde similis est *Bacteriæ bicorni*, Stoll (*Spectr. etc.*

pl. xv. fig. 57); ab ea autem differt metatarso superne haud lobato, cornubus capitis ad apices compressis et inæqualiter bidentatis.

The male was met with on Lot 14 Estate in September.—*H. H. S.*

Genus BACTERIA, Latreille.

1. B. CYPHUS, Westw.

Bacteria cyphus, Westwood, Cat. of Orth. Ins. in the Collect. of the Brit. Mus. i. Phasmidæ, p. 24, 1859, pl. vii. fig. 7.

Patria: St. Vincent, windward side.—Specimina duo.

Lot 14 Estate and Châteaubelais.—*H. H. S.*

2. B. LINEARIS, Drury (?).

Mantis linearis, Drury, Exot. Ent. i. pl. 50.

Bacteria linearis, Burmeister, Handb. ii. 567; Westwood, l. c. p. 24.

Patria: St. Vincent, windward side.—Specimina numerosiora.

Diagnoses in operibus citatis (Burmeister, Westwood, etc.), valde breves, non sufficiunt ad determinandam speciem. Fortasse specimina præsentia ad *Bacteriam gracilem*, Burm. (Handb. ii. p. 567), referenda sunt.

Genus DIAPHERODES, Gray.

1. D. GIGAS, Drury.

Diapherodes gigas, Drury, Exot. Ent. ii. pl. 50; Westwood, Catal. of Orth. Ins. i. Phasmidæ, p. 84.

Mantis angulata, Fabricius, Ent. Syst. ii. p. 13.

Patria: St. Vincent, windward side, leeward side (1200').—Specimina compluria, collecta in arboribus altis mensibus Januario, Maio, Octobri, et Novembri.—Occurrit etiam in insula Guadeloupe.

4. Familia ACRIDIODEA.

Tribus TRYXALIDÆ.

Genus ORPHULA, Stål.

1. O. PUNCTATA, de Geer.

Orphula punctata, Stål, 1873, Recens. Orthopt. i. p. 106.

Acrydium punctatum, de Geer, 1773, Mém. iii. p. 503, pl. 42. fig. 12.

Patria: St. Vincent, windward side.—Specimina numerosa.—Occurrit etiam in Mexico, Costarica, Guatemala, Nicaragua, Columbia, Venezuela, Surinam, Brasilia et Peru (*coll. Brunner*).

Abundant about Lot 14 Estate and Châteaubelais.—*H. H. S.*

Tribus TETTIGIDÆ.

Genus TETTIX, Charpentier.

1. T. QUADRIUNDULATUS, Redt. (n. sp.). (Plate XVI. fig. 10.)

Fuscus vel fusco-griseus, interdum pallido-conspersus, ubique minutissime granulatus. Vertex oculo latior, in medio carinatus, ante

oculos parum productus, apice breviter tridentatus. Costa frontalis ante oculos valde (a latere visa) rotundato-producta, carinis approximatis, subparallelis. Pronotum antice truncatum, postice haud subulatum sed acuminatum, apicem femorum posticorum haud attingens, superne in medio interdum utrinque macula nigra transversa ornatum. Carina media pronoti compressa, retrorsum sensim humilior, imprimis in ♀ valde quadri-undulata. Anguli humerales carinati, obtusi. Elytra ovata. Alae in ♀ valde abbreviate, in ♂ nonnihil longiores. Femora antica carinis haud undulata, intermedia superne subtusque undulata, postica haud undulata. Tibiae omnes fusco-annulate. Tarsi basi et apice fusi; metatarsus posticus articulis reliquis unitis nonnihil longior, pulvillo tertio quam pulvillis 1 et 2 simul sumptis brevior. ♂ ♀.

	♂		♀
Long. corpor.	4-5	millim.	6.4 millim.
„ pronot.	4-5	„	6 „
„ fem. post.	3.6	„	4 „

Patria: St. Vincent.—Specimina numerosa.

Valde affinis *Tettigi femorato*, Scudder (Trans. Amer. Ent. Soc. 1869, p. 305; Bolivar, Essai sur les Acrid. d. la trib. d. Tettigidæ, 1887, p. 90); ab eo differt præcipue carina media pronoti quadri-undulata.

Found at Châteaubelais, also at the south end of the island on rocky ground near the sea, under decaying leaves.—H. H. S.

TriBUS ACRIDIDÆ.

Genus VILERNA, Stål.

1. V. ÆNEC-OCULATA, de Geer.

Acrydium æneo-oculatum, de Geer, Mém. iii. p. 502, pl. 42. fig. 11 (1773).

Acrydium sanguinipes, Serville, Hist. nat. Ins. Orthopt. p. 670 (1839).

Patria: St. Vincent, windward side.—Specimina numerosa.—Occurrit etiam in Surinam (Stål, coll. Brunner).

Apparently common on Lot 14 Estate and at Châteaubelais.—H. H. S.

Genus CALETES, Redt. (nov. gen.).

(καλήτης = strumosus.)

Costa frontalis supra ocellum valde producta, carinis subparallelis, infra ocellum medium sensim evanescentibus. Fastigium verticis cum occipite fere in eodem plano jacens, antice sulco transverso nullo. Ocellus medius a scrobibus antennarum distincte remotus. Carinae laterales frontis subparallelæ, distinctæ, completæ. Pronotum totum cum capite rugosum, margine antico et postico truncato, tuberculis elevatis obsito, in medio valde carinatum, sulcis transversis tribus completis, carinam mediam insecantibus; carina media prope marginem posticum compresso-elevata. Carinae laterales subdistinctæ, irregulares, inter sulcos duos

posticos extrorsum curvatæ; angulus anticus loborum lateralium in tuberculum productus, margine inferiore subrecto obliquo. Meso- et metanotum cum abdominis segmentis omnibus rugosa, pilosa, superne carina media longitudinali, margine postico granulis vel tuberculis elevatis instructa. Elytra et alæ nulla. Prosternum protuberantia conica, erectu, longa. Lobi mesosternales parum (♀) vel haud (♂) transversi, intervallo vis parum angustiore. Lobi metasternales distincte distantes, intervallo quam in mesosterno angustiore (præcipue in ♂). Peles pilosi. Femora postica superne remote serrulata, lobis apicalibus rotundatis. Tibiæ posticæ superne teretes, utrinque spinis 6, intervallis aequalibus, apice superne spinis apicalibus nullis. Cerci ♂ breves, acuminati, recti. Valvulæ superiores ovipositoris extus crenulate. ♂, ♀.

Hoc genus, valde affine *Vilernæ*, Stål (Rec. Orth. i. 1873, pp. 38 et 71), differt pronoto in medio strumoso, elytris alisque nullis.

1. *C. APTERUS*, Redt. (n. sp.). (Plate XVI. fig. 11, a, b.)

Olivaceus, dilute obscure marmoratus, lateribus plerumque obscurioribus. Venter cum pectore viridi- vel ferrugineo-testaceus. Tuberculi elevati thoracis et abdominis fuscii. Femora postica extus dibute, intus distincte fusco-bifasciata, carinis omnibus remote nigro-serrulatis. Tibiæ posticæ sordide flavescens, annulo subbasali sulfureo, spinis flavis vel sulfureis, apice fusconigris. Tarsi ferruginei. ♂ ♀.

	♂	♀
Long. corpor.	27 millim.	37-38 millim.
„ pronot.	5.2 „	6.5 „
„ fem. post.	15.5 „	19.8 „

Patria: St. Vincent, windward side, Bow-wood prope Kingstown (1000').—Specimina nonnulla, partim imperfecta, collecta prope marginem silvarum.

Found on Lot 14 Estate on three occasions in April and May.—*H. H. S.*

Genus *SCHISTOCERCA*, Stål.

1. *S. PALLENS*, Thunberg.

Gryllus pallens, Thunberg. Mém. Ac. Pétersb. v. p. 237 (1815); Mém. Ac. Pétersb. ix. p. 422 (1824).

Schistocerca pallens, Stål, Rec. Orthopt. i. p. 66 (1873).

Patria: St. Vincent, windward side.—Specimen unicum.—Occurrit etiam in Cuba, Haïti, Jamaica (coll. Brunner).

Lot 14 Estate in April.—*H. H. S.*

2. *S. COLUMBINA*, Thunberg.

Gryllus columbinus, Thunberg, Mém. Ac. Pétersb. ix. p. 425 (1824).

Schistocerca columbina, Stål, Rec. Orthopt. i. p. 67 (1873).

Patria: St. Vincent, windward side.—Specimina compluria.—

Occurrit etiam in Mexico, Costarica, Nicaragua, Panama, Guatemala, Venezuela, Columbia, Surinam, Trinidad, Martinique, Brasilia, Peru (*coll. Brunner*), insula St. Bartholomæi (*Stål*).

Lot 14 Estate in April.—*H. H. S.*

5. Familia LOCUSTODEA.

Tribus PHANEROPTERIDÆ.

Genus ANAULACOMERA, Stål.

1. A. LATICAUDA, Brunner.

Anaulacomera laticauda, Br. Monogr. d. Phaneropt. 1878, p. 292.

Patria : St. Vincent, windward side.—Specimina compluria.—Occurrit etiam in Mexico et Columbia (*Brunner*).

Lot 14 Estate and Châteaubelais.—*H. H. S.*

Genus MICROCENTRUM, Scudder.

1. M. PALLIDUM, Brunner.

Microcentrum pallidum, Br. Monogr. d. Phaneropt. 1878, p. 337.

Locusta laurifolia, Stoll, Représ. des Spectres, etc. pl. vi. a. fig. 21 et pl. xvii. b. fig. 62.

Phylloptera laurifolia, Serville, Rev. méthod. p. 142; Orth. p. 404; Burmeister, Handb. ii. p. 693.

Patria; St. Vincent, windward side, leeward side.—Specimina compluria, collecta mense Julio.—Occurrit etiam in insulis Cuba et Martinique, necnon in Columbia (*Brunner*).

Lot 14 Estate in April and May.—*H. H. S.*

Genus STILPNOCHLORA, Stål.

1. S. MARGINELLA, Serville.

Phylloptera marginella, Serv., 1839, Hist. Nat. d. Ins. Orthopt. p. 405.

Phylloptera thoracica, Burmeister, 1839, Handb. ii. p. 693.

Stilpnochlora marginella, Brunner, 1878, Monogr. d. Phaneropt. p. 358.

Patria : St. Vincent.—Specimina duo.—Occurrit etiam in Mexico, Panama, Columbia, Venezuela, Surinam, Brasilia, Peru, in insula Cuba (*coll. Brunner*).

Tribus PSEUDOPHYLLIDÆ.

Genus BLIASTES, Stål.

1. B. SUPERBUS, Redt. (n. sp.). (Plate XVI. fig. 12.)

Ferrugineo-castaneus. *Antennæ longissimæ, articulis binis primis nigris. Frons dense rugosa, nigra vel fusco-ferruginea, utrinque carina laterali elevata instructa, superne utrinque ruga infraoculari, cum illa parallela. Occiput cum vertice saepe fusco-nigrum. Clypeus cum labro flavo-ferrugineus;*

mandibulæ apice fusco-castaneo. Pronotum dense rugoso-granulosum, in latere ruguloso-punctatum, dorso sæpe obscuriore, margine postico nonnihil producto, rotundato-truncato. Elytra femora postica valde superantia, apice rotundato, fusco-nigra, nitida, reticulo in area antica pallide testaceo, minus conferto, in area postica densiore flavo-ferrugineo, area anali plus minusve infuscata. Alæ late, fusco-griseæ. Pedes ferrugineo-castanei vel rufi; femora antica intus spinis 4, intermedia extus spinis 4-5 instructa; femora postica valida, extus spinis 9, omnibus apicibus nigris armata. Lobi geniculares femorum 4 anteriorum intus tantum brevi-spinosi, femorum posteriorum inermes, rotundati. Tibiæ anticæ superne planæ, carinis lateralibus haud dentatis. Venter flavo-ferrugineus. Cerci ♂ crassi, incurvi, granulosi et pilosi, apice obtusi et mucrone instructi. Lamina subgenitalis ♂ elongata, apice triangulariter excisa, stylis longis instructa. Lamina subgenitalis ♀ triangularis, apice incisa. Ovipositor basi latus, apicem versus sensim angustatus, nonnihil incurvus et infuscatus. ♂ ♀.

	♂	♀
Long. corpor.	53 millim.	54 millim.
„ pronot.	11·8 „	11 „
„ elytror.	49 „	51·3 „
„ fem. post.	28·3 „	30 „
„ ovipos.	—	26·5 „

Patria: St. Vincent, windward side.—Specimina nonnulla.

Hæc species ab omnibus congenericis differt colore capitis et pronoti.

Lot 14 Estate in April.—H. H. S.

2. B. STRIOLATUS, Redt. (n. sp.). (Plate XVI. fig. 13, a, b, c.)

Testaceus, pilosus. Antennarum articulus primus utrinque fusco-vel nigro-punctatus. Fastigium verticis superne infuscatum. Frons utrinque carina laterali obtusa, in medio maculis duabus nigris necnon in margine scrobium antennarum utrinque punctis 2 nigris ornata, superne supra basin mandibularum macula nigra parva necnon striga majore infraoculari utrinque signata. Labium parte inferiore fusco-nigra. Mandibulæ apice infuscato. Pronotum postice parum productum, rotundato-truncatum, dense rugoso-granulosum, margine antico et postico in medio nigro-maculatis, dorso vittis et lituris compluribus nigris ornato. Elytra femora postica valde superantia, apice rotundato, fusco-grisea, reticulo pallido, denso; tympano in ♂ infuscato. Alæ griseæ. Femora omnia extus, antica etiam utrinque, transverse nigro-striolata, 4 antica antice spinis 4, postica extus spinis 8, apicibus nigris, armata. Lobi geniculares femorum 4 anteriorum intus, femorum posteriorum utrinque spina apicali brevi, adpressa instructi. Segmentum anale ♂ valde convexum, subglobosum, postice longitudinaliter carinatum, carina subtus fissa, in lobos duos parallelos, rotundatos divisa.

Cerci ♂ *fere toti absconditi, apice obtuso. Lamina subgenitalis* ♂ *elongata, apice emarginata, stylis longis instructa. Lamina subgenitalis* ♀ *trigonalis, apice triangulariter excisa. Ovipositor* *latus, margine superiore subrecto, inferiore incurvo, dimidia parte apicali superne subtusque castanea. ♂ ♀.*

	♂	♀
Long. corpor. . . .	42 millim.	42 millim.
„ pronot. . . .	10·2 „	11·6 „
„ elytror. . . .	41·5 „	49·3 „
„ fem. post. . .	23·8 „	29·6 „
„ ovipos. . . .	—	23 „

Patria: St. Vincent, windward side, usque ad 1500'.—Specimina numerosiora.—Frequenter occurrit in silvis et locis umbrosis, die in foliis latis crispis.

Hæc species valde distincta est femoribus omnibus extus transverse nigro-striolatis.

Near the sea-level to 1500 feet. The species is pretty common in forest and shady places, secreting itself during the day in large curled leaves. Colours do not change much in drying.—*H. H. S.*

Genus CYRTOPHYLLUS, Burm.

1. C. CREPITANS, Redt. (n. sp.). (Plate XVII. fig. 14, a, b, c.)

Statura robusta. Flavo-viridis. Pronotum in parte posteriore carinis lateralibus distinctis. Elytra latissima, valde convexa, margine antico albido, basi interdum purpureo-maculato, margine postico valde rotundato, semicirculum formante; vena radialis fere tota cum vena subcostali unita, valde flexuosa, postice ramos 4 obliquos, parallellos emittens. Campus anticus elytrorum latus, venis parallelis regularibus numerosis; campus posticus venis transversis regulariter dispositis. Speculum ♂ *ovoideum, campus analis in ♂ brevis, parum longior quam latior, in ♀ duplo longior quam latior. Alæ hyaline. Femora antica intus spinis 6, extus 1 instructa, femora intermedia extus spinis 6, postica extus circiter 11 armata. Lobi geniculares omnes breviter spinosi. Segmentum anale ♂ apice in lobum productum, apice ipso dilatatum et truncato-emarginatum. Cerci ♂ simplices, cylindrici, obtusi, et apice hamo instructi. Lamina subgenitalis ♂ longitudinaliter cristata, apice profunde excisa, stylis longis et supra eorum basin dente parvo apicali instructa. Lamina subgenitalis ♀ apice profunde rotundato-excisa. Ovipositor longus, sensim acuminatus et incurvus, apice ferrugineo vel olivaceo. ♂ ♀.*

	♂	♀
Long. corpor. . . .	40–42 millim.	40–42 millim.
„ pronot. . . .	8·6 „	9·3 „
„ elytror. . . .	43 „	46·8 „
„ fem. post. . .	27 „	32·5 „
„ ovipos. . . .	—	24 „
Latit. elytror. . . .	26·5 „	24 „